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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KASSA, YOSEF

ART UNIT PAPER NUMBER

2623

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/945,515

Applicant(s)

WRIGHT, BURTON

Examiner

YOSEF KASSA

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/21/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 37-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 6-9, 16, 21, 26, 35, 37-50, 56-72 and 73-79 is/are allowed.
- 6) ☒ Claim(s) 1, 5, 13-15, 17, 18, 20, 22-25, 27, 28, 30-34, 51 and 54 is/are rejected.
- 7) ☒ Claim(s) 2, 4, 5, 7, 9-12, 19, 29, 52 and 55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

JINGGE WU
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments see the remark on page 16-20, filed on July 21, 2005, with respect to rejection(s) of claims 1, 2, 4, 5, 12-15, 17-20, 22-25, 27-34, 41 and 43 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made on Sakamoto (U.S. Patent 6,157,414), and further in view of Kim et al (U.S. Patent 6,714,692).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 15, 17, 18, 20, 25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto (U.S. Patent 6,157,414), and further in view of Kim et al (U.S. Patent 6,714,692).

With regard to claim 1, Sakamoto discloses an interpolation filter (see Fig. 4, item 6, perform filtering the enlarged/reduced image also see col. 4, lines 50-55), wherein the interpolation filter is to upscale the source image to an intermediate image (see col. 4, lines 44-51, broadly reads on the image input 1 of Fig. 5, is enlarge or reduce according to the necessary information read from buffer 5 of Fig. 5), wherein the intermediate

image has a size equal to a size of the destination image (note that the process of making the output image almost the same level of the outputted image by enlarge or reducing of an image using an interpolation see abstract); and downscale the intermediate image to the destination image (see col. 2, lines 40-51, note that input image from item 1 processed for enlarged/reduced via items 2-8 to obtain the same level of quality of the video image).

Sakamoto does not explicitly call for image adjusted by a scale factor and average filter. However, in the same field of endeavor, Kim teaches this feature (see col. 3, lines 28-42, note that the filter coefficient generator item 12 of Fig. 1 which broadly reads on average filter process because the filter generates filter coefficient by computing weight average value see abstract). At the time of the invention was made, it would have been obvious to a person an ordinary skill in the art to incorporate the teaching of Kim's image filtering and image scaling system into Sakamoto's system. The suggestion/motivation for doing so is to generate a finally scaled image by utilizing the filter coefficient obtained from the filter coefficient generating means (see col. 3, lines 40-50 of Kim). Therefore, it would have been obvious to combine Kim with Sakamoto to obtain the invention as specified in claim 1.

Claim 5 is similarly analyzed and rejected same as claim 1.

Claim 15 is similarly analyzed and rejected same as claim 1. Except, the additional limitation a "first average filter communicatively coupled to an output of the interpolation filter" Sakamoto does not disclose this feature. However, in the same field of endeavor, Kim teaches this feature (see col. 2, lines 40-47). At the time of the

Art Unit: 2625

invention was made, it would have been obvious to a person an ordinary skill in the art to incorporate the teaching of Kim's image filtering and scaling system into Sakamoto's system. The suggestion/motivation for doing so is to generate a finally scaled image by utilizing the filter coefficient obtained from the filter coefficient generating means (see col. 3, lines 40-50 of Kim). Therefore, it would have been obvious to combine Kim with Sakamoto to obtain the invention as specified in claim 15.

Claim 20 is similarly analyzed and rejected same as claim 1. As to the additional limitation of a processor and a storage device (see Fig. 5, item 12 microprocessor and item 4 and 5 buffer and memory).

Claim 25 is similarly analyzed and rejected same as claim 1. As to the additional limitation of a display device (see Fig. 5, item 11 computer comprises display device).

Claim 30 is similarly analyzed and rejected same as claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10, 13, 14, 22-24, 27, 28, 31-33, 51, 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto (U.S. Patent 6,157,414), and Kim et al (U.S. Patent 6,714,692), and further in view of Tse et al (U.S. Patent 5,473,342).

Claim 10 is similarly analyzed as claim 1. Except, the additional limitation of a graphics card, Sakamoto and Kim did not disclose this feature. However, in the same field of endeavor, Tse et al teaches this feature (see Fig. 1, item 30). At the time of the invention was made, It would have been obvious to a person an ordinary skill in the art to incorporate the teaching of Tse et al resolution of display image processing system into Sakamoto and kim system. The motivation for doing so is to provide the process of adjusting the output pixel rate to match the pixel by pixel base. Therefore, it would have been obvious to combine Tse with Sakamoto and kim to obtain the invention as specified in claim 10.

With regard to claim 13, Sakamoto discloses wherein the scale factor is based on a height (vertical) of the destination image (see col. 2, lines 47-51).

With regard to claim 14, Sakamoto discloses wherein the scale factor is based on a width (horizontal) of the destination image (see col. 2, lines 47-51).

Claim 51 is similarly analyzed and rejected same as claims 1 and 10.

Claims 22, 23 and 24 are similarly analyzed and rejected same as claims 13 and 14.

Claims 27 and 28 are similarly analyzed and rejected same as claims 13 and 14.

Claims 31, 32 and 33 are similarly analyzed and rejected same as claims 13 and 14.

Claims 53 and 54 are similarly analyzed and rejected same as claims 13 and 14.

Claim Rejections - 35 USC § 101

4. Claims 30-34 are rejected under 35 U.S.C. 101 because the claimed invention of is directed to non-statutory subject matter. Claim 10 recites the limitation "a program product comprising a signal-bearing media bearing instructions...." which are non-statutory. A program is functional descriptive material, and is only statutory when embodied in a computer readable medium. Applicant may overcome this rejection by rewriting the limitation "a program product comprising a signal-bearing media bearing instructions...." as "A computer medium or a computer readable medium storing or comprising...." (See MPEP 2106).

Allowable Subject Matter

5. Claim 3, 6-9, 16, 21, 26, 35, 37-50, 56-72 and 73-79 are allowed.

The following is an examiner's statement of reasons for allowance. The closest prior art of record failed to teach or suggest, a plurality of cascaded horizontal average filters to average horizontally the intermediate image on a two-by-two pixel basis, a line buffer to store output from the plurality of cascaded horizontal average filters, a plurality of cascaded vertical average filters to average vertically the intermediate image on a two-by-two pixel basis, and a selector to deliver an output of the plurality of cascaded horizontal average filters to both the line buffer and the plurality of cascaded vertical average filters (claims 3, 6, 16, 21 and 26); an averaging filter to downscale the intermediate bitmap to the destination bitmap, storage for storing a pixel from the intermediate bitmap, shifter logic to shift color components of the intermediate bitmap,

Art Unit: 2625

and adder logic to add the color components of the intermediate bitmap (claims 35, 40, 41 and 45-51). Therefore, in combination with all other limitations claims 3, 6-9, 16, 21, 26, 35, 37-50, 56-70 and 73-79 are allowable.

6. Claims 2, 4, 11, 12, 19, 29, 52 and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art Cited

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (5,838,835), (6,377,280), (5,847,772) and (5,461,655).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (571) 272-7452. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JINGGE WU can be reached on (571) 272-7429. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communication and (571) 273-8300 for after Final communications.


JINGGE WU
PRIMARY EXAMINER

Art Unit: 2625

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PATENT EXAMINER

Yosef Kassa

10/26/05.